

YELENEVSKAYA, N. B.

Mathematical Reviews.  
Vol. 15, No. 4  
Apr. 1954  
Astronomy

Elenevskaya, N. B. Expansion of a perturbation function  
in a Fourier series with respect to the inclination. I.  
Expansion of a perturbation function in the spatial circular  
restricted problem of three points in a Fourier series with  
respect to the inclination. Akad. Nauk SSSR. Byull.  
Inst. Teoret. Astr. 5, 271-302 (1953). (Russian)

EH

YELENEVSKAYA, N.B., zaveduyushchiy; DROB', I.M.; CHULIK, I.I.

Observations of minor planets at the L'vov Astronomical Observatory. As-  
tron.tsir. no.133:4 Ja '53. (MLR 6:6)

1. Otdel nebesnoy mekhaniki L'vovskoy Astronomicheskoy Observatorii.  
(Planets, Minor)

YELBNEVSKAYA, N.B.

Development of the perturbative function in Fourier's series relatively to inclination. Part 3. Development of the perturbative function in series according to the rate of eccentricity increase. Biul. Inst. teor. astron. 6 no.7: 434-465 '57. (MIRA 13:3)

(Problem of three bodies)  
(Fourier's series)

YELENEVSKAYA, N.B.

Development of the perturbative function in Fourier's series relatively to inclination. Part 4. Development of the perturbative function in a spatial limited elliptic problem of three bodies and in an unlimited problem of n bodies. Biul. Inst. teor. astron. 6 no.7:466-486 '57  
(MIRA 13:3)  
(Problem of many bodies) (Fourier's series)

YELENEVSKAYA, N.B.

Expansion of the perturbation function when eccentricity is  
near unity. Biul.Inst.teor.astron. 8 no.6:444-456 '62.  
(MIRA 15:8)

(Perturbation)

3.9900

1.11.97  
S/033/62/039/005/011/011  
E031/E535AUTHOR: Yelenevskaya, N.B.

TITLE: An investigation of the regions of convergence of the expansions in series of the coordinates of undisturbed motion

PERIODICAL: Astronomicheskiy zhurnal, v.39, no.5, 1962, 938-950

TEXT: The author investigated the expansion of functions of the eccentric anomaly, converging not along the whole trajectory, but only for particular values of the mean anomaly. Two types of such expansions are studied: one in powers of  $(1 - e)$ , where  $e$  is the eccentricity, the other in multiples of the eccentric anomaly. The relation between the eccentric anomaly and the eccentricity is given by the equation

$$E = M + e \sin E, \quad (1)$$

where  $M$  is the mean anomaly, from which may be derived the differential equation

$$\frac{dE}{de} = \frac{\sin E}{1 - e \cos E} \quad (2)$$

Card 1/3

An investigation of the regions ... S/033/62/039/005/011/011  
E031/E535

The equations for the curves on which lie the singular points of this equation for both elliptic and hyperbolic motions are obtained. Each curve is the continuation of the other, being a branch of the "particular curve of Keplerian motion", which is the envelope of a one-parameter family of circles whose radii are the radii of convergence of the expansion of the eccentric anomaly for elliptic and hyperbolic motions in powers of  $(e - e)$ ; a method of obtaining these radii is described. For values of the eccentricity near to unity the series converge slowly; therefore, the possibility of constructing series in powers of  $(1 - e)$  is considered and critical values of the mean anomaly are obtained as a function of  $e$ , for which the series converge. In order to study motion within this region of convergence, it is necessary to have Fourier series in the case of elliptic motion and Loran series in the case of hyperbolic motion in the eccentric anomaly. The coordinates of a point moving in a Keplerian orbit can be represented by functions of the form

$$\frac{f(e, E)}{(1 - e \cos E)^\alpha} \quad (27)$$

Card 2/3

An investigation of the regions ... S/033/62/039/005/011/011  
E031/E535

Introducing  $z = \tan \varphi/2$ , where  $\varphi = \arcsin e$ , the convergence in powers of  $(1 - z)$  of Eq.(27) (or, rather, its equivalent after the introduction of  $z$ ) is studied. The regions of convergence for the expansions in powers of  $(1 - e)$  and  $(1 - z)$  overlap for all  $M$ , except  $M = 0$ , so by combining the two types of series, motion along the whole trajectory can be studied. There are 9 figures and 6 tables.

SUBMITTED: June 28, 1961

Card 3/3

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YELENEVSKAYA, N. S.

YELENEVSKAYA, N. S.: "The course of the postoperative period and the regeneration of tissues in fractional pentothal sleep under experimental conditions." Second Moscow State Medical Inst imeni I. V. Stalin. Moscow, 1956. (Dissertations for the Degree of Candidate in Medical Sciences).

SO: Knizhnaya letopis', No. 37, 1956. Moscow.

YELENEVSKAYA, V.M.

4

Phase conversions in the system sodium sulfate-sodium hydroxide. M. I. Ravich and V. M. Yelenevskaya. Izvest. Akad. Nauk SSSR, Ser. Khim., No. 10, 1963, p. 2213.

Barbara Mayerle

YELENEVSKAYA, V M.

3

7 X-ray study of system sodium sulfate-sodium hydroxide  
① A. N. Klimova and V. M. Yelenevskaya, *Izvest. Nauk SSSR, Khim. Nauk* 25, 185-7 (1954); cf. *ibid.* 24, 290; preceding abstr.—X-ray study confirmed previous conclusions.  $\text{Na}_2\text{SO}_4$ -NaOH mixts. contg. 10% (I), 15.8% (II), 25.6% (III), and 30% (IV) NaOH were prep'd. by the method of Ravich, *et al.* I and II were slowly cooled, with stirring, and held several hrs. at 480-60°. III and IV were roasted several hrs. at 318-10°. Samples were tamped into quartz capillaries. In spite of precautions very small amts. of  $\text{H}_2\text{O}$  and  $\text{CO}_2$  were absorbed by the samples but the pictures could still be read. *Barilla May 1964*

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001962520014-1

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001962520014-1"

YEL'EMEN'AYA, V. N.

"Solid Phases Formed During Interactions of Sodium Hydroxide, Sodium Sulfate, and Sodium Chloride." Cand Chem Sci, Inst of General and Inorganic Chemistry, Moscow, 1955. (IL, No 12, Mar 55)

So: Sum, No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

YELENEVSKAYA, V.M.

CH Solubility isotherms at 70° and 200° of the system  $\text{Na}_2\text{SO}_4\text{-NaOH-H}_2\text{O}$ . M. I. Rayevich and V. M. Elenyavskaya. Izvest. Sektora Fiz.-Khim. Anal., Inst. Obrabotki i Neorg. Khim., Akad. Nauk S.S.R. 26, 200-7 (1956).—The limits of crystall. of  $\text{Na}_2\text{SO}_4$  at 70° and 200° were established for the system. At appreciable concn. of NaOH, complexes of NaOH and  $\text{Na}_2\text{SO}_4$  are formed. One of these,  $3\text{Na}_2\text{SO}_4\text{-2NaOH}$ , was confirmed by refraction and photomicrography. Crystn. from aq. solns. confirms transformations found in the anhyd. system  $\text{Na}_2\text{SO}_4\text{-NaOH}$ . V. N. Bednarski

(1) M



YELENEVSKAYA, V.M.

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, B-8  
Equilibria, Physical-Chemical Analysis, Phase Transitions.

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 406

Author : M.I. Ravich, V.M. Yelenevskaya.

Inst : -

Title : Phase Transformations in System Sodium Sulfate - Chloride -  
Hydroxide.

Orig Pub : Zh. neorgan. khimii, 1957, 2, No 5, 1134-1144

Abstract : The phase equilibria in the system  $\text{Na}_2\text{SO}_4$  (I) -  $\text{NaCl}$  (II) -  $\text{NaOH}$  (III) were studied by several methods of the physico-chemical analysis. The existence of an interior crystallization field of the  $\gamma$ -phase with an upper temperature limit of 446 to 448° was established. The final solidification of melts takes place at 285 to 290°. In the  $\gamma$ -phase, the content of I by weight predominates that of II, and the content of III does not exceed 15% by weight. The boundaries of the crystallization fields of

Card 1/2

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 406

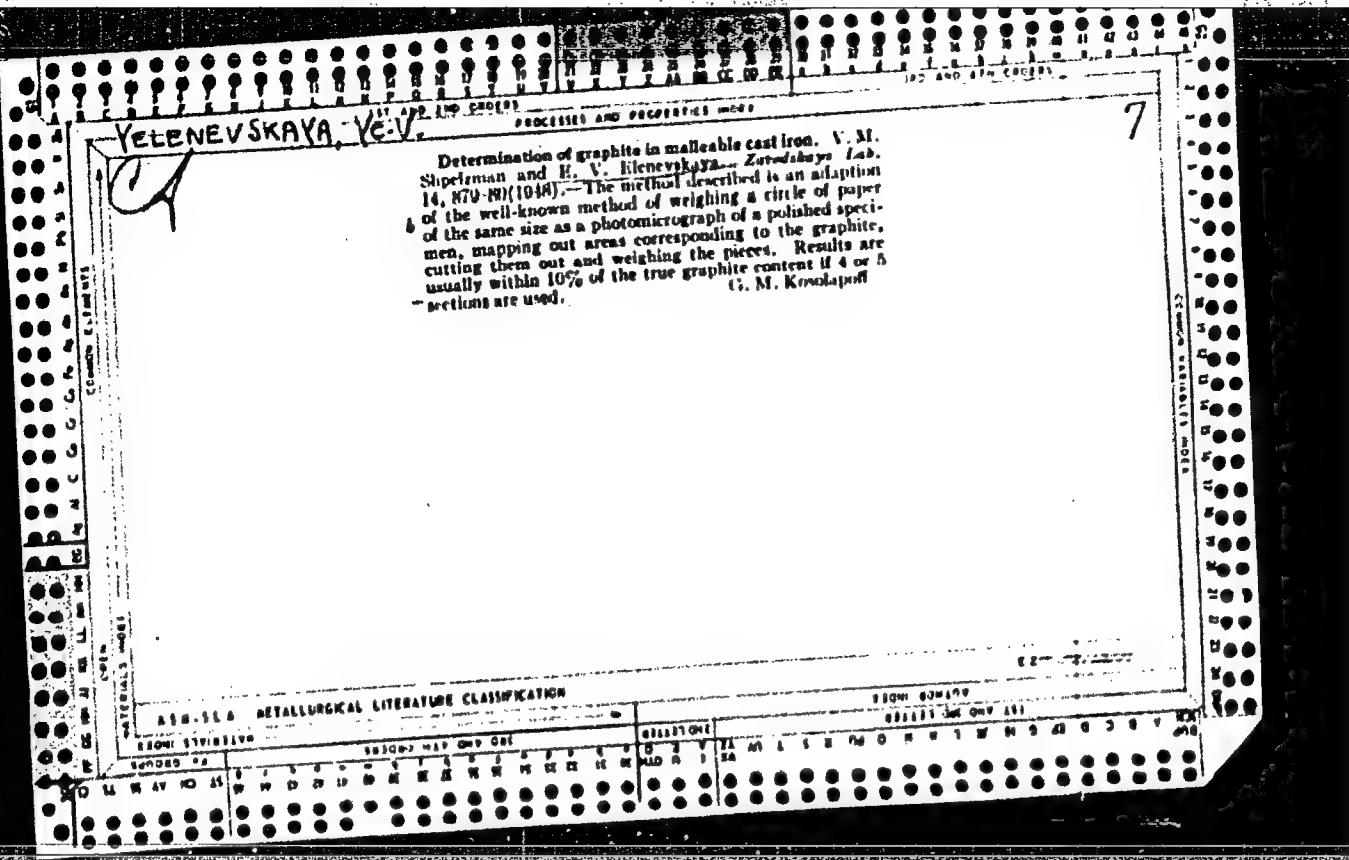
I, II, III, the  $\gamma$ -phase,  $S_1$ ,  $S_2$ ,  $\beta$ -III and  $\alpha$ -solid solutions are shown on the liquidus graph, also the isotherms of solubility and graphs of x-ray photograph computations confirming the existence of the  $\delta$ -phase are given. A table of thermal effects of the alloys according to heating curves is given.

Card 2/2

YELENEVSKAYA, V.M.; RAVICH, M.I.

Solubility of lithium sulfate and lithium carbonate in water at  
high temperatures. Zhur.neorg.khim. 6 no.10:2380-2386 O '61.  
(MIRA 14:9)

(Lithium sulfate) (Lithium carbonate) (Solubility)



YELEMENSKAYA, Ye. V.

Meadows

Working methods of Buryat-Mongol meadows workers, Korm. baza 3 No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

YELENEVSKAYA, Ye. V.

Feeding and Feeding Stuff's

All-union conference on feed production. Korm. taza 3 no. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

YELENEVSKIY, A.G.

New and little-known plants of Armenia. Bot.mat.Gerb. 19:  
554-557 '59. (MIRA 12:8)  
(Zangesur region--Botany)

YELENEVSKIY, A.O.

Two Caucasian species of the pink family. Biul. MOIP. Ctd. biol.  
65 no. 5:119-121 8-0 '60. (MIRI 1312)  
(CAUCASUS—PINKS)

VELENEVSKIY, A.G.

Materials on the flora of Zangezur. Izv. An Arm. SSR. Biol. nauki  
13 no.4:57-62 Ap '60.  
(MIRA 13:8)

1. Botanicheskiy institut Akademii nauk ArmSSR.  
(ZANGEZUR RANGE—BOTANY)

YELENEVSKIY, A.G.

Some rare plants hitherto unknown in Armenia. Nauch. dokl. vys. shkoly; biol. nauki no. 1:123-125 '61. (MIRA 14:2)

1. Rekomendovana kafedroy botaniki Moskovskogo gosudarstvennogo pedagogicheskogo instituta im. V.I. Lenina. (ARMENIA—BOTANY)

GABRIELYAN, E.TS.; YELENEVSKIY, A.G.

Some remarkable features of the flora and vegetation of Mount  
Khustup (Zangezur). Izv. AN Arm. SSR. Biol. nauki 14 no.1:41-47  
Ja '61. (MIRA 14:3)

1. Botanicheskiy institut AN Armyanskoy SSR i Moskovskiy Gosudar-  
stvennyy pedagogicheskiy institut im. Lenina.  
(KAFAN DISTRICT—BOTANY)

YELENEVSKIY, A.G.

Some plants (controversial) of Transcaucasia. Bot. mat. Gerb.  
21:15-19 '61. (MIRA 14:10)  
(Transcaucasia--Foxtail)  
(Transcaucasia--Birthwort)

PROSKURYAKOVA, G.M.; YELENEVSKIY, A.G.

Notes on *Veronica rubrifolia* Boiss. and *V. ferganica* M.Pop.  
Bot. mat. Gerb. 21:325-327 '61. (MIRA 14:10)  
(Soviet Central Asia--Speedwell)

YELENEVSKIY, A.G.

Some rare and controversial plants of Armenia (the crowfoot, mustard, orpine, and rose families). Nauch. dokl. vys. shkoly; biol. nauki no.2: 128-133 '62. (MIRA 15:5)

1. Rekomendovana kafedroy botaniki Moskovskogo gosudarstvennogo pedagogicheskogo instituta im. V.I.Lenina.  
(ARMENIA--BOTANY)

YELENEVSKIY, A.G.

Materials on the flora of Zangezur; Leguminosae. Nauch.kokl.vys.  
shkoly; biol.nauki no.4:118-120 '62. (MIRA 15:10)

1. Rekomendovana kafedroy botaniki Moskovskogo gosudarstvennogo  
pedagogicheskogo instituta im. Lenina.  
(ZANGEZUR RANGE—LEGUMINOSAE)

YELENEVSKIY, A.O.

Two new species of Leguminosae from Armenia. Biul.MOIP.Otd.biol.  
67 no.3:128-130 My-Je '62. (MIRA 15:11)  
(Armenia--Lathyrus) (Armenia--Milk vetch)

YELENEVSKIY, A.G.

Some rare and critical plants of Armenia; Geraniaceas, Linaceas,  
Euphorbiaceae, Guttiferae, Violaceae, Umbelliferae. Izv. AN Arm.  
SSR. Biol. nauki 15 no. 9:27-34 S '62. (MIRA 15:11)

1. Moskovskiy pedagogicheskiy institut imeni Lenina i Botanicheskiy  
institut AN Armyanskoy SSR.  
(ARMENIA--BOTANY)

YELENEVSKIY, D.S.

122-5-23/35

AUTHOR: Yelenevskiy, D.S. (Engineer)

TITLE: The Effect of Grinding on the Endurance of Case Hardened Components. (Vliyaniye shlifovaniya na vynoslivost' tsementovannykh detaley)

PERIODICAL: Vestnik Mashinostroyeniya, 1957, Nr 5, pp.65-70 (USSR)

ABSTRACT: The specimens of 18XHBA steel were rings of 100 mm outside dia., 78 mm inside dia. and 15 mm width, subjected to 5 variants of heat treatment, producing endurance strengths between 69 and 107 kg/mm<sup>2</sup>. These were tested under alternating compression in the plane of the ring in a resonance pulsator. Four variants of heat treatment were associated with ordinary production grinding. The fifth variant differed only by grinding before quenching and tempering. This variant gave the highest endurance strength. The pronounced effect of grinding was more closely studied in another set of tests concerned with different conditions of grinding. Indifferent grinding with burnt spots sharply reduced the endurance below 47 kg/mm<sup>2</sup>. Careful grinding by itself maintained an endurance limit of 103 kg/mm<sup>2</sup>. Shot-peening of "burnt" specimens increased their endurance strength two-fold to 94 kg/mm<sup>2</sup>. The combination of careful grinding and

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The Effect of Grinding on the Endurance of Case Hardened Components.

shot-peening achieved  $113 \text{ kg/mm}^2$ . Apart from the effects of burning and of grinding cracks, those of decarbonising and, in particular, of residual austenite, were revealed in these tests; the latter could be removed by sub-zero heat treatment. Residual stresses were found by the Sachs method. The association between compressive residual stress and high endurance strength was confirmed in all cases as illustrated in graphs of residual stress against depth.

There are 7 figures, including 5 graphs and 1 photograph, 4 tables and 4 references, including 3 Slavic.

AVAILABLE: Library of Congress.

Card 2/2

YELENEVSKIY, D.S., inzh.

Residual stresses and strength of cemented-gear teeth. Vest.  
mash. 38 no.9:10-13 S '58. (MIRA 11:10)  
(Gearing)

YELENEVSKIY, D. S., Candidate Tech Sci (diss) -- "Investigation of the fatigue resistance of cemented gears in connection with certain design and technological factors". Moscow, 1959. 14 pp (Min Higher Educ USSR, Moscow Aviation Tech Inst), 170 copies (KL, No 24, 1959, 136)

SO/122-53-2-6/34

AUTHOR: Yelenevskiy, D.S., Engineer

TITLE: On the Cause of the Increase of the Endurance of Steel  
After Case Hardening (O prichinakh povysheniya  
vynoslivosti stali pri tsementatsii)

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 2, pp 20-24 (USSR)

ABSTRACT: In the relevant literature, one hypothesis makes the case hardened layer entirely responsible for the observed increase in endurance strength under alternating loads in case hardened steel specimens. Another hypothesis allocates the main responsibility to residual stresses in the surface layer. Finally, S.V.Serenets (at the Symposium "Increased Strength of Machine Components" in USSR, 1949) asserts that the increase in the hardness of the carburised layer, which leads to a rise in its fatigue strength in the range of initial static compression, is successfully matched with residual stresses arising in case hardening. Experimental evidence is contradictory and the present paper reports on tests to examine the residual stresses in the case hardened layer and to

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On the Cause of the Increase of the Endurance of Steel After  
Case Hardening

determine the endurance strength of the case hardened layer relieved of residual stresses and of a case hardened steel specimen with known residual stresses. Previous reports vary in their evaluation of the residual stress between 18 and 130 kg/mm<sup>2</sup>. The well-proved method of Davidenkov, N.N. ([Ref 13]: Zhurnal Tekhnicheskoy Fiziki, 1939, Nr 12) has been used in the tests reported. Specimens of 100 x 20 mm rectangular cross-section but of different height had their surface layer removed by etching to a depth of 20 microns on the average. 12KhN4A steel, 18Kh11VA steel and steel 20 were examined. Gas carburising to a depth of 1.2 mm achieved a carbon content of 1.0 to 1.2% with a hardness of 58 to 60 Rockwell C. The distribution of residual stress (Fig 1) shows a surface peak compressive stress of about 100 kg/mm<sup>2</sup>, dropping rapidly to about 20 kg/mm<sup>2</sup> at a depth of 0.1 mm. This remains constant until the end of the carburised layer is reached. Residual austenite, as in 12Kh2N4A steel changes the pattern. At a depth of 0.2 mm, where the

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residual austenite is found, the residual stress vanishes but rises again at a greater depth. In 18KhNVA steel specimens, with even more residual austenite, tension stresses up to 30 kg/mm<sup>2</sup> appear on the surface. The ratio of case depth to specimen thickness (relative depth) has a decisive effect on the residual stress. A range of 0.024 to 0.3 was examined. The peak stress drops substantially from about 120 kg/mm<sup>2</sup> with a relative case depth of 0.3 to about 70 kg/mm<sup>2</sup> with a relative case depth of 0.024. The evenly distributed stress level remains substantially constant at 20 kg/mm<sup>2</sup>. It is concluded that the even stress distribution invariably amounts to 10 to 20 kg/mm<sup>2</sup>. It is usually assumed that structural transformations are responsible for residual stresses in the case but metallographic analysis does not confirm this view. Moreover, the top layer of case hardened steel is somewhat decarburised. In one set of tests, it was found that specimens with a surface layer ground away before quenching had the same

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peak stresses as ordinary specimens. In another set of tests, the residual stresses were determined in specimens subjected to "dummy" case hardening. The same peak stresses have been obtained. It is concluded that the peak stresses at the surface in case hardened steel are unconnected with the carbon saturation and are due entirely to temperature stresses. The evenly distributed stress occurring at a depth of 0.1 mm and over however, is a tensile stress in the absence of a carburised layer and amounts to only a few kg/mm<sup>2</sup>. Hence, this part of the residual stress distribution is due to structural transformations. A special method for obtaining a stress relieved carburised layer was developed. The rectangular specimen was case hardened all round to a depth of 1.5 mm (hardness of 60 Rockwell C). After quenching, a working specimen was cut, whose thickness at the bottom of a notch was 1 mm. The middle part of the specimen over a length of 10 mm constituted a stress-relieved case hardened layer. Half of these specimens, after quenching, had 0.02 to 0.03 mm removed

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SOV/22-59-2-6/34

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by lapping, the others remained untouched. Specimens subjected to dummy case hardening as well as hardened and tempered specimens of the same shape, size and hardness were prepared with hardnesses of 51 and 41 Rockwell C, respectively. All specimens were made of 12Kh2N4A steel. The tests were carried out in flexure with a symmetrical cycle. The fatigue curves (Fig 6) show that specimens with a stress-relieved case hardened layer have a fatigue strength of 90 kg/mm<sup>2</sup> when lapped and 78 kg/mm<sup>2</sup> without lapping. Specimens subject to dummy case hardening have a fatigue strength of 42 kg/mm<sup>2</sup>. Hardened and tempered specimens, of 60 kg/mm<sup>2</sup>. Tubular specimens of 12Kh2N4A steel (Fig 7) were made with a wall thickness in the working length amounting to 1 mm. Through-carburising was used to obtain a stress-relieved layer. The carbon content and micro-structure were thoroughly controlled. The specimens were not machined after quenching. Similar specimens subject to dummy case hardening (32 Rockwell C)

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were tested. The fatigue tests took place in tension-compression on resonance type and hydraulic pulsators. The tests show (Fig 7) that carburised specimens with a fatigue strength of  $54 \text{ kg/mm}^2$  were superior to uncarburised ( $36 \text{ kg/mm}^2$ ). Residual tension stresses sharply reduce the fatigue strength. Residual compressive stresses increase the fatigue strength, though not at the same rate. Fig 7 also shows the effect of the residual stresses on the fatigue strength both for carburised and non-carburised specimens. The effect of residual stresses was tested with the help of flat smooth specimens in 12Kh2N4A steel of 8 mm thickness. The effect of the scale factor due to the difference between the wall thickness of 1 mm in the stress-relieved carburised layer and 8 mm in the residual stress specimens was estimated to be 13%. It follows that the residual compressive stresses found in the carburised layer of case hardened steel have little effect on its fatigue strength. The remaining increase of about 12% is due to the evenly distributed stress level in the

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case. To verify this conclusion, 6 sets of specimens of 12Kh2N4A steel with different properties of the surface layer were tested. Half of these had the de-carburised surface layer removed by polishing. This increased the fatigue strength by 10 to 30%. Another set of specimens had different hardness values. The fatigue strength was found to be directly proportional to the hardness. There are 10 figures and 18 references, 14 of which are Soviet and 4 English

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18/1120

S/122/60/000/010/003/015  
A161/A030

AUTHORS: Yelenevskiy, D.S., Candidate of Technical Sciences, and  
Shneyerson, L.M., Engineer

TITLE: Fatigue Resistance of Thermo-Chemically Hardened Steel Parts  
in Work with Asymmetrical Load Cycles

PERIODICAL: Vestnik mashinostroyeniya, 1960, No.10, pp. 17-22

TEXT: The authors tested case hardened and nitrided 12X2H4A (12Kh-  
2N4A) and 40XHMA(40KhNMA) steel specimens. Case hardened specimens were  
tested in bending and twist and nitrided specimens in twist only. The in-  
formation includes calculations. The results lead to the conclusion that  
the effect of thermo-chemical treatment depends considerably on the degree  
of asymmetry of the work load cycle, rising to the maximum at symmetrical  
load and dropping with increasing asymmetry. It was apparent that hardened  
layer properties and not interaction with the core metal has the determining  
effect, and this may be considered in calculations of fatigue resistance re-  
serve. If a stress limit diagram (Fig.7) obtained in tests of full-scale  
machine parts is available, the resistance reserve for the case of cycle

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89350

S/122/60/000/010/003/015  
A161/A030

Fatigue Resistance of Thermo-Chemically Hardened Steel Parts in Work with Asymmetrical Load Cycles

similarity may be determined by the formula

$$n = \frac{(\sigma'_{-1K})_D}{\sigma'_a + \psi_2 \sigma'_m} , \quad (1)$$

where  $(\sigma'_{-1K})_D$  is the durability limit of the part in symmetrical cycle, and  $\psi_2$  the diagram reduction factor. But as such a diagram is seldom available, a diagram of smooth unhardened laboratory specimens has to be used and the known formula

$$n = \frac{\sigma'_{-1}}{(K_g)D\sigma_a + \psi_1 \sigma_m} , \quad (2)$$

In all gear teeth failure cases known to the authors the fatigue sources were on the layer surface, and in fatigue failure of case hardened bevel gear rims there were characteristic sub-layer failures caused by resonance

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0720  
S/122/60/000/010/003/015  
A161/A030

Fatigue Resistance of Thermo-Chemically Hardened Steel Parts in Work with  
Asymmetrical Load Cycles

vibration which was produced by pitch inaccuracy. It is obvious that the surface finish of hardened layer has a decisive effect on the fatigue resistance of parts working with asymmetrical load cycles. It had been previously found by the authors that work hardening by shot blasting considerably neutralized the detrimental effect of grinding burns and residual tension stresses. Work hardening prevents the fatigue lamination and "polar" failure of gear teeth (Ref. 2-4). Electrolytic polishing of the ground spur and bevel gears ensures effective flanking and "combination" ("bombinirovaniye") of gear teeth and improves the finish, which in turn raises the scar resistance of teeth. In the authors' experiments, electro-polishing raised the fatigue limit of case hardened specimens in the pulsating work cycle by 5-35%, depending on the preceding surface finish. There are 10 figures and 5 Soviet references.

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89350

S/122/60/000/010/003/015  
A161/A030

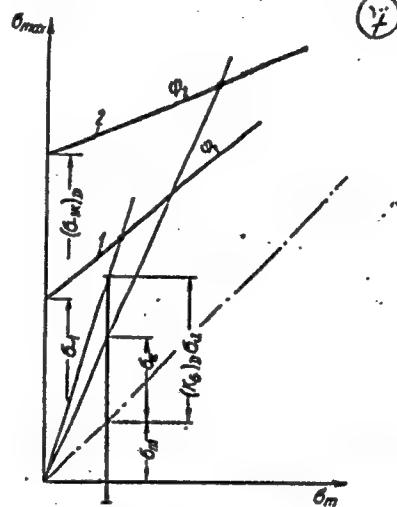
X

Fatigue Resistance of Thermo-Chemically Hardened Steel Parts in Work with  
Asymmetrical Load Cycles

Fig. 7 : Diagram of stress limit

1 - line for smooth  
laboratory specimens

2 - line for full-scale  
parts



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YEREMENOVICH, D. S. and L. M. SLEPYANOV

On the Breakdown of Gear Teeth Along the Pitch-Line on the Tooth Surface.

Povsheniye iznosostoykosti i sroka sluzhby mashin. t. 2 (Increasing the Wear Resistance and Extending the Service Life of Machines. v. 2) Diyev, Izd-vo AN UkrSSR, 1960. 290 p. 3,000 copies printed. (Series: Issled. trudy, t. 2)

Sponsoring Agency: Vsesoyuznoye nauchno-tehnicheskoye obshchestvo mashinostroyitel'noy promyshlennosti. Tsentral'noye i Kiyevskoye oblastnoye pravleniya. Institut mekhaniki AN UkrSSR.

Editorial Board: Resp. Ed.: B. D. Grozin; Deputy Resp. Ed.: N. A. Braygor; N. P. Braun, I. D. Payneman, I. V. Kragel'skiy; Scientific Secretary: N. L. Barabash; Ed. of v. 2: Ya. A. Samokhvalov; Tech. Ed.: N. P. Rakhлина.

COVERAGE: The collection contains papers presented at the Third Scientific Technical Conference held in Kiyev in September 1957 on problems of increasing the wear resistance and extending the service life of machines. The conference was sponsored by the Institut stroitel'noy mekhaniki AN UkrSSR (Institute of Structural Mechanics of the Academy of Sciences Ukrainian SSR), and by the Kiyevskaya oblastnaya organizatsiya nauchno-tehnicheskogo obshchestva mashinostroyitel'noy promyshlennosti (Kiev Regional Organization of the Scientific Technical Society of the Machine-building Industry).

YELENEVSKIY, D.S.; SHNEYERSO, L.M.

Strength of steel parts subjected to chemical heat treatment  
in case of asymmetric cycles of loading. Trudy Sem.po kach.-  
poverkh. no. 5:156-162 '61. (MIRA 15:10)  
(Case hardening)

S/514/61/000/005/007/014  
1007/1207

AUTHOR: Yelenevskiy, D.S. and Smeyerson, L.B.

TITLE: Endurance limit under asymmetric cyclic loads, of steel components subjected to combined chemical-heat treatment hardening

SOURCE: Akademiya nauk SSSR. Komissariya po tekhnologii mashinostroyeniya. Seminar po kachestvu poverkhnosti. Trudy. No.5, 1961. Kachestvo poverkhnosti detalej mashin; metody i pribory, uprochneniye metallov, tekhnologiya mashinostroeniya, 156-162

TEXT: Results are reported of investigations carried out both on nonhardened and surface hardened test-specimens of cemented and nitrided alloy steels. These investigations were of particular importance since, so far tests were carried out mainly under symmetrical loading. Cemented test-specimens were tested in bending and twisting, whereas nitrided specimens were tested in twisting only. As a results of tests, diagrams of limiting loads were plotted. Ample analysis is made of the test results and a formula for determining the safety margin of chemically coated components is derived. The influence of final machining of certain cemented components on their resistance to asymmetric loads, was investigated and it was found that shot-

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S/514/61/000/005/007/014  
1007/1207

Endurance limit under...

peening treatment improves endurance limit. A new process for electrolytic polishing of ground cylindric and bevel gears was developed and adopted in practice Abstractor's note: see reference 11 in this year. L. S. Simeyerson "Branch of V.L.I.T.I., eb.1,no.4-59-332/5, 1959. This process greatly improves the profile of the gears and hence their anti-seizing properties. Tests also showed electrolytic polishing to improve endurance limit of components subjected to pulsating cyclic loads, by 5-35% in dependence on the degree of previous machining. There are 4 figures and 1 table.

Card 2/2

YELENEVSKIY, G. S.

Raschet kol'tsa na mnogikh oporakh pod deistviem aktsial'nykh nagruzok. Moskva,  
1935. 32 p., tables, diagrs. (TSAGI. Trudy, no. 207)

Summary in English.

Title tr.: Stress analysis of an axially loaded ring resting on many  
supports.

QA911.M65 no. 207

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of  
Congress, 1955.

YELENEVSKIY, G. S.

Rabota dvukhlonzheronnogo trapetsoidal'nogo kryla na kruchenie. Moskva, 1935, 130 p.,  
tables, diagrs. (TSAGI. Trudy, no 208)

Summary in English

Title tr.: Stress analysis of a two-spar tapered wing under torsion.

CA911.M65 no. 208

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress,  
1955

YELNEVSKIY, G. S.

O raschete na prochnost' lodki s uchetom poteri ustoichivosti prodol'nogo nabora. Moskva, 1937. 42 p., tables, diagrs. (TSAGI. Tekhnicheskie zameтки, no. 145)

Title tr.: Calculation of the structural strength of thin-walled hulls with due consideration given to buckling of longitudinal members.

TL570.M6 no. 145

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

YELENEVSKIY, G. S., and V. M. DARESVKII.

Kruchenie dvukhlonzheronnogo piramidal'nogo kryla s nepreryvno raspolozhennymi  
shest' kimi na izgib nerviurami. Moskva, 1937, 44 p., illus., tables, diagrs.  
(TSAGI. Trudy, no. 292)

Summary in English.

Title tr.: Torsion of a two-spar pyramidal wing with closely spaced ribs of great  
stiffness.

QA911.M65 no. 292

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress,  
1955

YELENEVSKIY, G. S., and others.

Raschet na prochnost' metallicheskikh lodok gidrosamoletov.  
(TSAGI. Trudy, 1940, no. 483, illus.)  
Title tr.: Stress analysis of hulls of flying boats.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of  
Congress, 1955.

YELENEVSKIY, G. S.

PHASE X

## TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 754 - X

Call No.: AF653756

## BOOK

Author: YELENEVSKIY, G. S.

Full Title: STRUCTURAL MECHANICS OF A VARIABLE SECTION WING

Transliterated Title: Stroitel'naya mekhanika kryla peremennogo  
secheniya

## PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of the Defense Industry

Date: 1954 No. pp.: 228

No. of copies: Not given

Editorial Staff: None

PURPOSE AND EVALUATION: The book is destined for design and calculating engineers and may also be used by students of aviation institutions of higher learning. The book is interesting as an advanced study of strength of contemporary aircraft.

## TEXT DATA

Coverage: The book contains the statement of a method of calculation of stresses and deformations of the wing of an aircraft, taking into account the varying surfaces of the sections of the longitudinal wing assembly, the thickness of the skin, and also the conical shape of the wing. The theories of the calculation of the wing are based on the theory of the prismatic bar, adapted to the calculation of wings by Belyayev, V. N.

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Stroitel'naya mekhanika kryla peremennogo secheniya

AID 754 - X

## Table of Contents

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Chapter III About normal stresses in a non-conical wing	41-46
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Chapter VI Forces and moments of the external load	74-77
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Chapter IX Particular case of an axis of rigidity of a section	95-114

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Stroitel'naya mekhanika kryla peremennogo secheniya      AID 75<sup>4</sup> - X

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Stroitel'naya mekhanika kryla peremennogo secheniya      AID 754 - x

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Bibliography		199-226
No. of References: Total 34, Russian 24, 1932-1951, others, 1932-1946.		226-227
Facilities:	None	

4/4

Name: YELENEVSKIY, Georgiy Sergeyevich

Dissertation: Structural mechanics of a wing of  
variable cross-section

Degree: Doc Tech Sci

Affiliation: Not indicated

Defense Date, Place: 24 Dec 56, Council of Moscow Order  
of Lenin Aviation Inst imeni  
Ordzhonikidze

Certification Date: 5 Oct 57

Source: BMVO 23/57

## E. L. E. N. vs King, U. S.

THE 1970-71 ALL-INDIA CONGRESS AT THE STATE LEVEL 119

Moscow, 27 Jan - 1 Feb '60.  
202. J. Denevi (Urgen): The size of areas and duration of  
the Arctic blizzards.

363. T. H. Parker (Chairman): On some new forms of the general solution of the three-dimensional problem of the theory of elasticity suggested in harmonic function theory.

1975. Dr. G. B. Argus (University of Alberta, Edmonton) *Seasonal distribution of the arctic charr, *Salvelinus alpinus* (L.), in the Mackenzie River basin, with special reference to the effects of the hydroelectric development on the fishery*.

卷之三

1926. — *Journal of the Royal Statistical Society, Series B*, a classic difference analysis of agricultural yields with mathematical notes.

226 H. B. Phillips (Warther). The construction of solutions of the equations of structural mechanics by means of special boundary element methods.

112. *S. a. Brevicauda*: A small or intermediate size, the wings of venous and  $\sigma$  veins and the  $\delta$  and  $\gamma$  lines in anterior margin darkened.

122. *John V. Fletcher (Dissertation): The reliability of the 1910 census*

Fig. 2. *Influence of temperature on the shear strength of  
the 100% bentonite sample.* The shear strength of the  
bentonite sample was determined at the optimum  
water content of 30% and at temperatures of 20, 40,  
60, 80, and 100°C.

224. *W. B. Rogers (Chairman): The definition of the ground under  
the name "Foothills".*

112. *Arch. Bureau of the Treasury*: *Decree* of the Bureau of the Treasury on the creation and structure of the *Central Bank* of the Russian Empire.

1114 **Dr. S. B. Johnson (Democrat):** The integrated question  
comes in. I think, taking account of the last  
series of bills.

Fig. 20. (Continued) Elastic properties of a plastic and brittle state under combined loading.

222. *Prokaryotes* do not have a nucleus or nucleoplasm to do division of the nucleus in the cells of a multicellular organism.

222- *Brachyplatystoma (Brachyplatystoma)* (in the group of ctenoids of plastic in a stone water temperature locality).

223- *Leiobium (Chasmodes)* (in the soft sand—water).

1250 *Lepturges*, *Lepturges* (Lepturges); an *expansive* *overlapping* *characteristic* of *some* *older* *specimens*.

220. *Indigo Dyeing* (Chemical): The properties of an alkali were also an underground application.

12. 10. 1919. Mr. President (Speaker): The law of last  
and previous [unintelligible]

1926. Dr. L. L. Shatto (Administrator) Plan of water-control and  
water-power facilities

1926. Mr. L. L. Shatto (Administrator) The hydroelectric of magnetic and

136. Dr. J. R. (Jameson): On the occurrence of absolute plastic bodies.

122. Dr. Lester W. East (Underwood): Plastic seal on bottom of television studio box that has been on temple church since plastic was invented.  
123. Dr. Lester W. East (Underwood): Plastic seal on bottom of television studio box that has been on temple church since plastic was invented.

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CIA-RDP86-00513R001962520014-1"

YELEINOVSKY, K. F.

DECEASED c-1949-

"A Case of Leimyoma of the Small Intestine Unique in Form and Origin," Khirurgiya,

No. 8, 1949.

YELENEVSKIY, M. A.

20

10

Diphenyl ether. M. A. Elenskii, Russ. 61,917, May 31, 1926. PhCl is heated with  $K$  phenolate and an excess of phenol at atm. pressure in the presence of  $CuCl_2$  as catalyst.

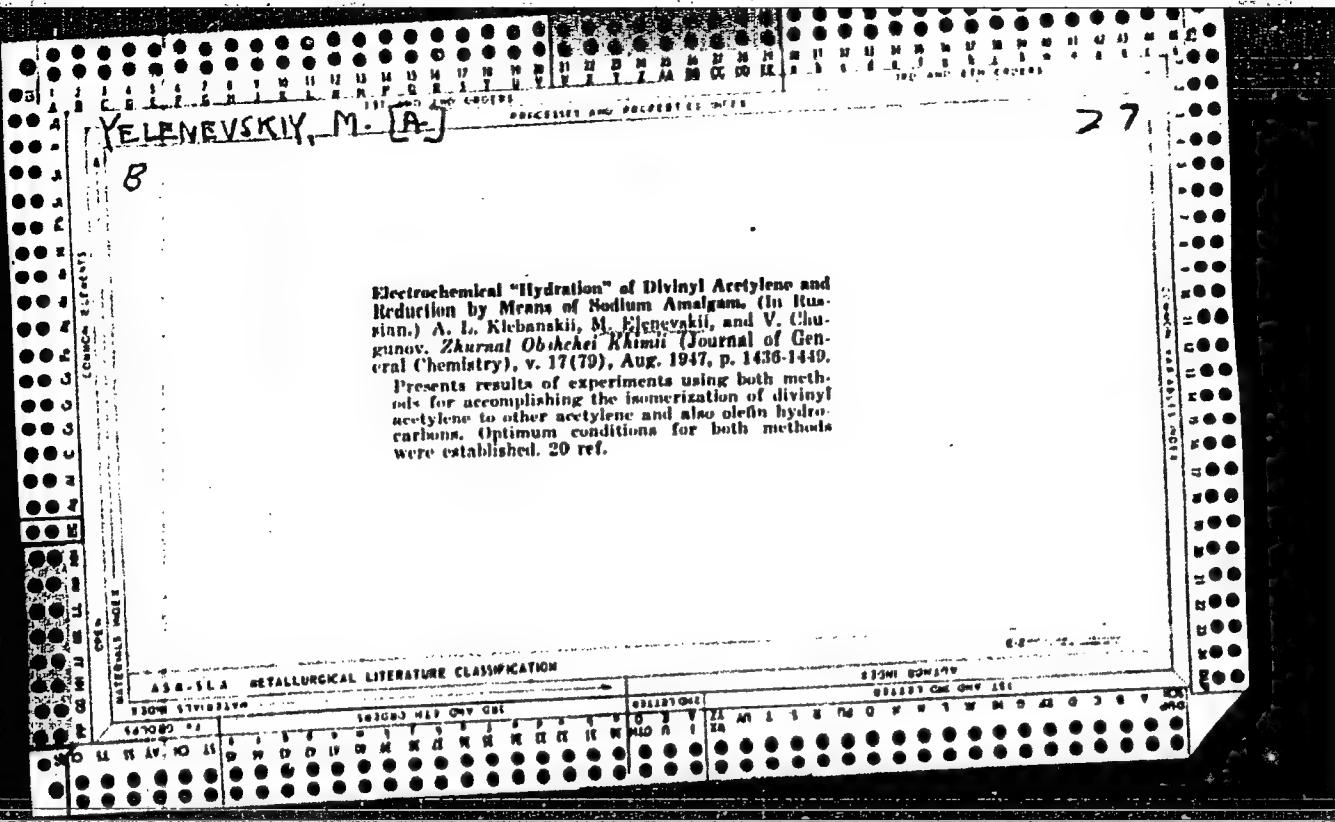
ABU-SEA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001962520014-1"

YELENEVSKIY, M. A.

Preparation of diphenyl oxide. M. A. El'nen'skiy and  
G. Artamonova. *J. Gen. Chem. (U. S. S. R.)* 8,  
407-9 (in French 500) (1938).—Ph<sub>2</sub>O, m. 27-8°, b. 258-9°,  
was prep'd. in 64% yield from 21.5 g. PhOH, 22.5 g.  
PhCl, 11.2 g. KOH and 0.5 g. CuCO<sub>3</sub> by heating the  
mixt. to 210-15° in 6 hrs. and holding at this temp. for  
an addnl. 2.5-3 hrs. (cf. Russ. pat. 40,917 (1936)).  
Chas. Blane



YELENEVSKIY, N.N.

Design of geodetic bench mark frameworks in cities. Geod. i kart.  
no. 6:18-27 Je '57. (MIRA 10:3)  
(Bench marks) (Triangulation)

AUTHOR:

Yelenevskiy, N. N.

DDV/6-58-7-7/19

TITLE:

On the Problem of Pre-Determining Errors in Engineering Surveys (K voprosu o predvychislenii oshibok stroitel'noy setki)

PERIODICAL: Geodeziya i kartografiya, 1958, Nr 7, pp. 39-41 (USSR)

ABSTRACT:

In the article "Determination of the Accuracy of an Engineering Lines and Grades System", by N. G. Viduyev, Doctor of Technical Sciences, which was published in Geodeziya i kartografiya, 1957, Nr 8, formulae for the predetermination of the weights and of the errors of point locations in an engineering lines and grades system and the method of successive approximation was suggested for solving this problem. Despite the simplicity of the formulae a great amount of work must be done when this method is used, as the weights of all unknowns must be determined. In practical work, however, only the error at the weakest point of the lines and grades system must be known. For comparison the weights are determined at the same example as was used by Viduyev using the method of intermediate measurements. It appears that the results obtained markedly differ from those found by Viduyev. This

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SOV/6-58-7-7/19

On the Problem of Pre-Determining Errors in Engineering Surveys

discrepancy can be explained by the fact that the method of Viduyev can only be applied to referenced lines and grades systems and not to free systems. In Geodeziya i kartografiya, 1957, Nr 6, a method of determining the weights in leveling networks is advanced by the author. This method can also be used in the computation of the weights in polygonometric or theodolite networks. Formula (2) is recommended for the pre-determination of the errors in polygonometric networks, after the weakest point of the system has been computed. There are 2 figures, 2 tables, and 3 references, which are Soviet.

1. Mapping 2. Geophysical surveying—Errors 3. Theodolites—  
Performance 4. Theodolites—Calibration

Card 2/2

YUL'ENEVSKIY, N.N.

The project of the "Directions for engineering explorations in  
city and village construction." Geod.i kart. no.2:48-57 P  
'60. (MIRA 13:6)  
(Topographical surveying)

YELENEVSKIY, N.N.

Calculating the precision of the intersection by interior angles.  
Geod. i kart. no.8:33-40 Ag '65. (MIRA 12:9)

ELENEVSKIY, R. A. and others.

ELENEVSKII, R. A. and others. Prirodnye resursy Iuzhnoi Jakutii v sviazi s sotsialisticheskoi rekonstruktsiei sel'skogo khoziastva. Moskva, Gos. izd-vo kolkh. i sovkh. lit-ry, 1933. 147 p. DLC: S471.R9P73

SO: LC, Soviet Geography, Part I, 1951, Uncl.

YELENEVSKIY, R. A.

Problems in the study and utilization of flood lands. Moskva, Vses. akademiko sel'khoz. nauk im. V. I. Lenina, 1936. 99 p.

KOLEMENSKIY, A. A.

35931 O parkovykh vysokotravykh klenovnikakh kavkazskogo zapovednika. Nach.-  
metod. Zapiski (Sovet ministrov resor, Glav. Upr. po zapovednikam), Vol. 12, 1949,  
S. 330-33

SO: Letopis 'Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

YELENEVSKIY, R.A.

35949 azmychskoye vysokogornoye boloto zapadnogo kavkaza. nauch-  
metod. zapiski (sovet ministroy rsfsr, glav. upr.  
po zapovednikam), vyp. 12, 1949, S. 334-38

SO: Letopis' Zhurnal'nykh Statey, No. 49, 1949

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001962520014-1

30980 Vchera V sibal'pke kavkazskogo zapovednika nauch.-metod. Zapiski (Sovet  
ministrov RSFSR, Glav. upr. po zapovednikam). Vol. 12, 1942, S. 339-44.

SO: Letopis' Zhurnal'nykh Statey, Vol. 3, Moskva, 1942

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001962520014-1"

YELENEVSKIY, V., kandidat tekhnicheskikh nauk

Improvement works for earthen road beds. Zhel.dor.transp. no.8:  
66-71 Ag'47. (MIRA 8:12)

1. Direktor-polkovnik puti i stroitel'stva  
(Railroads--Earthwork)

YELENEVSKIY, V.G.

Control of venereal and skin diseases in the Apollon district  
of the Stavropol Territory. Vest. derm. i ven. 37 no. 8:59-63  
Ag'63 (MIRA 17:4)

Y  
YELENEVSKIY, V. V.

Zehleznodorozhnoe stroitel'stvo v usloviakh merzloty; novye metody stroitel'stva v  
raionakh merzloty i glubokogo promeraaniia. [Railroad construction under conditions  
of frozen grounds: new methods of construction in regions with frozen and deeply  
frozen grounds]. Moskva, Transzheldorizdat, 1936. 238 p. illus., maps.  
"Ispol'zovannye raboty": p. 235-[236].

DLC: TA710.E4

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress  
Reference Department, Washington, 1952, Unclassified.

YELENIN, A., kapitan

Light of a beacon. Voen. vest. 42 no.6:10-11 Je '62.  
(Bomb reconnaissance) (MIRA 15:6)

YAKUBOV, A.; YELENIN, M.

~~SECRET~~  
A legend that became reality. Sov.mor. 17 no.14:8-9 J1 '57.  
(MLRA 10:9)  
(Uzbekistan--Economic conditions)

Yelenin, M. Ya.

86-8-18/22

AUTHOR: Yelenin, M. Ya.

TITLE: Skill Developed in Searching for the New (Masterstvo, rozhdayemoye v poiskakh novogo)

PERIODICAL: Vestnik Vozdushnogo Flota, 1957, Nr 8, pp.85-87 (USSR)

ABSTRACT: Pilot Ivan Polunin graduated from the Kacha Aviation School in 1929. In 1932 he commanded an aviation brigade in Belorussia and served for some time as inspector of pilot-training technique of the Zabaykal'skiy Military District Air Force. At the outbreak of World War II, Maj. Polunin was serving in a regiment stationed West of Belostok where he trained pilots to fly new MiG-3 fighters. He took part in the defense of Moscow, and later trained aviation reserves in the Volga district. Lt. Col. Polunin was the first SAF line pilot to fly a jet (Sept 29th, 1946), the first to perform acrobatics in a jet fighter (YAK-15) at the Air Force Day Parade, Aug 3d, 1947, and the first to lead a flight of YAK-15's in formation. Hero of the Soviet Union Colonel Khramov, a World War II veteran with 18 enemy planes and over one hundred combat sorties to his credit, followed the example of Lt Col Polunin and made some

Card 1/2

Skill developed in Searching for the New (Cont.)

86-8-18/22

further improvements in jet piloting technique. At the Air Force Day Parade, Aug 3d, 1947, Cols. Khramov, Yefremov and Solov'yev were the first pilots in the world to perform group acrobatics in jet aircraft. A diagram of the "swing" performed by Lt Col Polunin over the Tushino airfield shows the path of the aircraft and the maneuvers made by the pilot.

AVAILABLE: Library of Congress

Card 2/2

YELININ, S.N.; DORENSKIY, M.I.

Apparatus for washing the sand of slow filters. Vod.i san.  
tekh. no.8:33-34 Ag '60. (MIRA 13:7)  
(Filters and filtration)

TELENIN, S.N., inzh.

Hydraulic level controller for liquids with coarse digested  
sludge particles. Gor. khoz. Mosk. '74 no.9:15-36 S '60.

(MIRA 13:9)

(Sewage--Purification)

YELENIN, S.N.; DAGAYEV, P.F.

Addition of ammonia without mixing. Vod. i san. tekh. no.6:40  
Je '62. (MIRA 15:7)

1. Glavnnyy mekhanik Rublevskoy vodoprovodnoy stantsii (for  
Yelenin). 2. Nachal'nik tsekha ochistki vody Rublevskoy  
vodoprovodnoy stantsii (for Dagayev).  
(Water—Purification)  
(Ammonia)

YELENINA, D.

"Mother's diary." Reviewed by D. Elenina. Zdorov'e 7 no, 2:29  
F '61. (MIRA 14:2)  
(INFANTS—CARE AND HYGIENE)

САВИЧ, В. П., ЙЕЛЧИК, А. А.

Lichens - Russia, Asiatic

Introduction to the lichens of the Asiatic part of the U.S.S.R. Trudy Ent. inst. AN SSSR., Ser. 2, No. 6, 1950

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

YELENKIN, A. A., LIDIA, OL'.

Algae - Bibliography

Supplementary bibliography of works on algae found within the  
confines of the USSR. Trudy Bot. inst. AN SSR No. 6, 1950. (Ser. 2)  
Systematic list of the fresh-water green algae found within the  
confines of the USSR up to 1938 with critical comment.  
Trudy Bot. inst. AN SSR Ser. 2, No. 6, 1950

Monthly List of Russian Accessions, Library of Congress, June 1952 Unclassified

YELENKIN, A.A.

Together with V.L.Komarov in the Eastern Sayans; from a travel diary  
(with an introductory article by V.I.Polianskii). Trudy Inst.ist.est.  
i tekhn. 16:253-334 '57. (MIRA 10:10)  
(Sayan Mountains--Description and travel)  
(Elenkin, Aleksandr Aleksandrovich, 1873-1942)

YELENKOV, D.; KOLEV, N.

Effect of foam-forming substances on scrubber hydrodynamics.  
Khim.prom. no.10:761-764 0 '62. (MIRA 15:12)  
(Scrubber (Chemical technology))

YELENKOV, D. [Elenkov, D.]; BOZHOV, I.

Influence of surface-active admixtures on the hydrodynamics of  
sieve downcomerless trays. Doklady BAN 17 no.8:733-736 '64.

1. Predstavлено акад. D.Ivanovym.

YELENKOV, Ye.

BULGARIA/Plant Diseases. Diseases of Cultivated Plants.

0-2

Abs Jour: Ref Zhur-Biol., No 6, 1958, 25355.

Author : Yelenkov, Ye.

Inst :

Title : The Reaction of Pepper Varieties to Verticillium Wilt.

Preliminary Report.

(Reaktsiya sortov perts na vertitselleznoye uvyadaniye  
(Preivaritel'noye soobshcheniye).

Orig Pub: Byul. rastit. zashchita, 1957, 6, No 1, 32-37.

Abstract: No abstract.

Card : 1/1

Yelenkov, Ye.

BULGARIA/Plant Diseases - Diseases of Cultivated Plants.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15998

0.

Author : Yelenkov

Inst :

Title : The Effect of Irrigation on Vegetable Crop Diseases.  
(Vliyaniye orosheniya na zabolевaniya ovoshchnykh kul'tur).

Orig Pub : Ovoshcharstvo i gradinarstvo, 1957, No 6, 39-41.

Abstract : No abstract.

Card 1/1

- 8 -

Yelenkov, Ye.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962520014-1

CATEGORY : Plant Diseases - Diseases of Cultivated  
Plants.

ABS. JOUR. : Biol., No. 12, 1958, No. 54021

AUTHOR : Yelenkov, Yelenko

INST. : Not given

TITLE : Cladosporium Infection in Cucumbers (In  
Bulgaria)ORIG. PUB. : Ovoshcharstvo i gradinarstvo, 1957, No. 10,  
41-45

ABSTRACT : No abstract

CARD: 1/1

BULGARIA / Chomical Technology. Chemical Products and H-2  
Their Application. Chemical Engineering.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1544.

Author : Yelenkov, D.

Inst : --

Title : The Absolute Solubility Rate of Gypsum in a  
Closed System.

Orig Pub: Godishnik Khim.-tekhn. in-t, 1956 (1957), No 1,  
1-10.

Abstract: The absolute solubility rate (SR) of gypsum was  
studied by the flow of distilled water inside a  
horizontal tube containing gypsum. The relation-  
ship between SR and flow speed, in turbulent and  
laminar regions was determined. In the laminar  
region SR agrees with the hydrodynamic theory of  
convective diffusion. For the turbulent region  
the following equation is suggested:

$$Nu = 9.42 \times 10^{-5} \cdot Po - 152.5,$$

Card 1/2

BULGARIA / Chemical Technology. Chemical Products and H-2  
Their Application. Chemical Engineering.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1544.

Abstract: where Nusselt's diffusion is  $Nu = d/D$  where is  
the diffusion rate, d is the diameter of a tube  
and D is the diffusion coefficient), and the dif-  
fusion criterion of Peclie is  $Pe = wd/D$ .

Card 2/2

YELENKOVA, N.

Germany/Physical Chemistry - Electrochemistry, B-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61190

Author: Trifonov, A., Yelenkova, N.

Institution: None

Title: Polarographic Investigation of the Complex of As(3) with Tartaric Acid

Original

Periodical: Polarographische Untersuchung des Arsen (III) Komplexes mit der Weinsaeure, Z. phys. chem. (DDR), 1956, 205, No 3, 123-137; German

Abstract: Investigation of polarographic reduction of the complex of  $H_3ASO_3$  (I) with tartaric acid (II) having the assumed composition  $M(ASO)C_4H_4O_6$  (III) where  $M = Na^+, K^+$  or  $NH_4^+$ . With  $Na_2SO_4$  (~0.1 M) background were obtained well defined limit currents ( $I_1$ ) proportional to the concentration of III ( $C_3$ ) in the  $C_3$  interval  $10^{-4}$  -  $10^{-2}$  M, linearly depending on  $\sqrt{h}$  and having a temperature coefficient  $\sim 2\%$ .  $E_{1/2}$  depends on  $C_3$  and temperature. At constant concentration of I ( $C_1$ ) and increasing concentration of II ( $C_2$ ),

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Germany/Physical Chemistry - Electrochemistry, B-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61190

Abstract:  $I_1$  increases if  $C_2 < C_1$  (in ekv). With  $C_2 > C_1$ ,  $I_1 = \text{const}$ . With  $C_2 > C_1$  there appear second ( $I_2$ ) and third ( $I_3$ ) waves. With increasing  $C_2$ ,  $I_2$  increases at first and thereafter reaches a constant value.  $I_3$  increases with  $C_2$  and decreases of  $C_1$ . With  $C_2 \gg C_1$  the polarographic curves show sharp maxima the heights of which are proportional to  $C_1$ . It is assumed that  $I_1$  is determined by reduction of III, during which H<sup>+</sup> ions are consumed in amount proportional to  $C_3$ ;  $I_2$  is associated with emission of hydrogen, catalyzed by As, formed on reduction of III;  $I_3$  is due to reduction of H<sup>+</sup> ions, formed on dissociation of II and not used up in the first 2 processes. According to equation of Il'kovich it was found that in the reaction take part 3 electrons. A scheme is given of the reduction of III. It is reported that waves suitable for analytical purposes are also obtained with a background of KCl, KNO<sub>3</sub>, and CaCl<sub>2</sub>. With NH<sub>3</sub> + NH<sub>4</sub>Cl background at pH 8.3-10.7 only one wave is formed the height of which is proportional to  $C_1$ .

Card 2/2

COUNTRY	:	Bulgaria	E-2
CATEGORY	:		
ABSTRACT JOUR.	:	RZKhim., No. 1959, No. 86183	
AUTHOR	:	Pavlov, D.; Yelenkova, N.	
INST.	:	Chemical Institute, Bulgarian Academy of Sciences	
TITLE	:	Absorption of Arsine by Potassium Iodate Solution and Its Use in Polarographic Determination of Arsenic.	
ORIG. PUB.	:	Izv. Khim. in-t. B"lg. AN, 1958, 6, 33-43	
ABSTRACT	:	A method has been developed for determination of As, based on reduction of As to AsH <sub>3</sub> , absorption of AsH <sub>3</sub> by standard solution of KIO <sub>3</sub> , and polarography of unreacted IO <sub>3</sub> . The sample is treated with a current of H <sub>2</sub> (2n in 30% H <sub>2</sub> SO <sub>4</sub> ). The evolved AsH <sub>3</sub> is absorbed in 20 ml of a mixture having the composition: 2 N H <sub>2</sub> SO <sub>4</sub> , 0.00755 N KIO <sub>3</sub> and 0.00037 N Ce(SO <sub>4</sub> ) <sub>2</sub> ; completeness of absorption is checked with 10% ammoniacal solution of AgNO <sub>3</sub> (duration of absorption 30-40 minutes). Ce(SO <sub>4</sub> ) <sub>2</sub> catalyzes the reaction 8HIO <sub>3</sub> +5AsH <sub>3</sub> = 5H <sub>3</sub> AsO <sub>4</sub> +4I <sub>2</sub> +4H <sub>2</sub> O; at the same time there takes place in the system the reaction: 2I <sub>2</sub> +IO <sub>3</sub> +6H <sup>+</sup> = 6I <sup>+</sup> +3H <sub>2</sub> O, and it is proposed to add to absorption mixture, as	
CARD:	1/2		

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COUNTRY : Bulgaria E-2  
CATEGORY :

ABS. JOUR. : RZKhim., No. 1959, No. 86183

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT : a stabilizer of  $I^+$ , tartaric acid at 0.0106 M concentration. Polarography is carried out with 15 ml of the solution, after adding thereto 0.5 ml of 0.5% gelatin solution. -- N. Turkevich.

CARD: 2/2

TELENOV, L. K.

Dissertation: "Biology of Lehman's Dodder and an Investigation of Some Methods for Controlling It." Cand Biol Sci, Soil Biology Faculty, Central Asia State Univ., 16 Apr 54. (Pravda Vostoka, Tashkent, 6 Apr 54)

SO: SUN 243, 19 Oct 1954